

WHAT IS CLAIMED IS:

1. A domain power notification system comprising:
a plurality of power domains that receive a corresponding
5 plurality of status signals, and output a corresponding plurality of power
signals so that each power domain receives a corresponding status
signal and outputs a corresponding power signal, each domain being
independently powered, the power signals representing power supply
voltages on the power domains so that each power signal represents a
10 power supply voltage on a power domain, each power domain being
connected to at least one other power domain; and
a domain notification circuit connected to a first domain of the
plurality of power domains, the domain notification circuit being
independently-powered, receiving a power signal from the first domain
15 and a second power domain, and outputting a status signal to the first
domain, the status signal indicating a power condition of the second
power domain.
2. The system of claim 1 wherein the domain notification
20 circuit detects when a power signal from the second power domain falls
below a minimum operational voltage.
3. The system of claim 2 wherein the domain notification
circuit detects when the power signal from the second power domain
25 rises above the minimum operational voltage.
4. The system of claim 3 wherein the domain notification
circuit includes a low-voltage detection circuit that detects a voltage

level of the power signal from the first domain and a voltage level of the power signal from the second domain, and outputs the status signal to the first domain.

5 5. The system of claim 4 wherein the low-voltage detection circuit includes a filter that removes voltage spikes from the power signal from the first domain and the power signal from the second power domain.

10 6. The system of claim 5 wherein the plurality of power domains receive a corresponding plurality of power on reset signals so that each power domain receives a power on reset signal, and powers up in response to the power on reset signal.

15 7. The system of claim 1 wherein the domain notification circuit detects when a power signal from the first power domain falls below a minimum operational voltage.

20 8. The system of claim 7 wherein the domain notification circuit detects when a power signal from the first power domain rises above a minimum operational voltage.

25 9. The system of claim 1 wherein the domain notification circuit detects when a power signal from the first power domain rises above a minimum operational voltage.

10. The system of claim 2 wherein the domain notification circuit detects when a power signal from the first power domain falls below a minimum operational voltage.

5 11. The system of claim 10 wherein the domain notification circuit detects when a power signal from the first power domain rises above a minimum operational voltage.

10 12. The system of claim 3 wherein the domain notification circuit detects when a power signal from the first power domain falls below a minimum operational voltage.

15 13. The system of claim 11 wherein the domain notification circuit detects when a power signal from the first power domain rises above a minimum operational voltage.

20 14. The system of claim 1 and further comprising a plurality of domain notification circuits that correspond with the plurality of power domains so that each domain notification circuit is connected to a corresponding power domain, the domain notification circuit being one of the plurality of domain notification circuits.

25 15. The system of claim 14 wherein each domain notification circuit detects when a power signal from another power domain falls below a minimum operational voltage.

16. The system of claim 15 wherein the domain notification circuit detects when the power signal from another power domain rises above the minimum operational voltage.

5 17. A method of operating a domain power notification system, the system comprising:

a plurality of power domains that receive a corresponding plurality of status signals, and output a corresponding plurality of power signals so that each power domain receives a corresponding status
10 signal and outputs a corresponding power signal, each domain being independently powered, the power signals representing power supply voltages on the power domains so that each power signal represents a power supply voltage on a power domain, each power domain being connected to at least one other power domain; and

15 a domain notification circuit connected to a first domain of the plurality of power domains, the domain notification circuit being independently-powered, receiving a power signal from the first domain and a second power domain, and outputting a status signal to the first domain, the status signal indicating a power condition of the second
20 power domain,

the method comprising the steps of:

monitoring a power signal from the second power domain; and

outputting a status signal to indicate when the power signal from the second power domain falls below a minimum operational voltage.

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18. The method of claim 17 and further comprising the step of outputting the status signal to indicate when the power signal from the second power domain rises above a minimum operational voltage.

19. The method of claim 17 and further comprising the step of outputting the status signal to indicate when the power signal from the first power domain falls below a minimum operational voltage.

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20. The method of claim 19 and further comprising the step of outputting the status signal to indicate when the power signal from the first power domain rises above a minimum operational voltage.

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